

/*Design, Develop and Implement a Program in C for evaluation of Suffix expression
with single digit operands and operators: +, -, *, /, %, ^.

*/

#include<stdio.h>

#include<stdlib.h>

#include<math.h>

int i, top = -1;

int op1, op2, res, s[20];

char postfix[90], symb;

void push(int item)

{

top = top+1;

s[top] = item;

}

int pop()

{

int item;

item = s[top];

top = top-1;

return item;

}

void main()

{

printf("\nEnter a valid postfix expression:\n");

scanf("%s", postfix);

for(i=0; postfix[i]!='\0'; i++)

{

symb = postfix[i];

if(isdigit(symb))

{

push(symb - '0');

}

else

{

op2 = pop();

op1 = pop();

switch(symb)

{

case '+': push(op1+op2);

break;

case '-': push(op1-op2);

break;

case '*': push(op1*op2);

break;

case '/': push(op1/op2);

break;

case '%': push(op1%op2);

break;

case '\$':

case '^': push(pow(op1,op2));

break;

default : push(0);

}

}

}

}

```
res = pop();  
printf("\n Result = %d", res);  
}
```